

**2007 UPDATE TO THE STATE OF MONTANA
MULTI-HAZARD MTIGATION PLAN AND
STATEWIDE HAZARD ASSESSMENT**

APPENDIX H

STATE PLAN REVISION LOGS

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 1 - INTRODUCTION

Date	Sub-Section	Description of Revision	Revised By:
4/25/07	1.0	Added Tetra Tech as preparer of plan update	Tetra Tech
4/25/07	1.0	Added Communicable Disease to list of hazards profiled.	Tetra Tech
4/25/07	1.1	Added funding source for 2007 plan update	Tetra Tech
4/25/07	Table 1.2.1	Updated population figure with 2006 census estimate	Tetra Tech
4/25/07	Table 1.2.1	Added number of Tribal Reservations	Tetra Tech
4/25/07	Table 1.2.6	Added 2006 population estimates for Montana and U.S.	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 2 – PLANNING PROCESS

Date	Sub-Section	Description of Revision	Revised By:
4/25/2007	2.1	Revised details on contractor who facilitated the planning process for the plan update	Tetra Tech
4/25/2007	2.1.1	Updated involvement of Advisory Group	Tetra Tech
4/25/2007	2.1.2	Updated involvement of Stakeholders Group	Tetra Tech
4/25/2007	2.1.3	Updated involvement of Hazard Technical Groups	Tetra Tech
4/25/2007	2.1.4 & 2.1.5	Switched order of subsections 2.1.4 and 2.1.5 and renamed subsection 2.1.4 Local Involvement	Tetra Tech
4/25/2007	2.1.4	Updated Local Involvement section with description of 12 meetings held around the state	Tetra Tech
4/25/2007	2.1.5	Renamed section and provided description of Project Web Page and On-Line Survey	Tetra Tech
6/28/2007	2.1.6	New section added on Plan Review and Adoption Process. Included reference on assurances that State will continue to comply with all applicable Federal statutes and regulations during periods of grant funding.	Tetra Tech
4/25/2007	2.1.7	Updated Planning Process Structure to include how team reviewed and analyzed each section of the plan and whether or not it was revised as part of the update process.	Tetra Tech
4/26/2007	2.3	Removed reference to 2001 Montana Hazard Mitigation Plan and Montana Earthquake Hazard Reduction Program Five Year Plan. Added descriptions of other state plans and programs including: Montana COOP and COG Plans, State Human Disease and Public Health Plan, Montana Dept. Agriculture Emergency Response Plan, Montana Citizens Corps. and Montana University System PDM Plans. Added descriptions of the following local plans and programs: Local Emergency Operation Plan, Local Pandemic Influenza Plans, and, Guidelines for Montana Agricultural Emergencies for Local and Tribal Governments.	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 2 – PLANNING PROCESS

Date	Sub-Section	Description of Revision	Revised By:
4/26/2007	Tables 2.2-1 & 2.2-2	Add new responsibility of Dept. Administration. Moved Montana University System to State Government Organizations and Responsibilities. Omitted specific reference to MSU and UM on Non-Government Organizations and Responsibilities	Tetra Tech
7/9/2007	Figure 2.1-1	Added updated figure on status of approved Local PDM Plans	Tetra Tech
4/26/2007	Figure 2.1-2	Added figure showing six DES Districts	Tetra Tech
4/26/2007	Figure 2.1-3	Added new figure illustrating 2007 Planning Process Organizational Structure	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 3 – HAZARD ASSESSMENT

Date	Sub-Section	Description of Revision	Revised By
<i>TEXT CHANGES</i>			
4/30/2007	3.1.1	Added Communicable Disease to list of hazards	Tetra Tech
5/2/2007	3.1.1	Added status of approved PDM Plans	Tetra Tech
5/2/07	3.1.2.1	Indicated that state and locals validated which hazards to profile in State Plan Update	Tetra Tech
5/2/2007	3.1.2.4	Updated number of approved local PDM Plans	Tetra Tech
5/2/2007	3.1.2.5	Incorporated hazard exposure at local level	Tetra Tech
5/2/2007	3.1.3	Review of revised hazard profiles	Tetra Tech
5/2/2007	3.1.5.2	Description of local hazard assessment summary	Tetra Tech
5/3/2007	3.2.1.1	Updated values for State buildings	Tetra Tech
5/4/2007	3.2.4.1	Replaced minority statistics in Table 3.2.4-1 with narrative	Tetra Tech
5/4/2007	3.2.4.2.1	Updated statistics on elderly populations	Tetra Tech
5/4/2007	3.3.1	Added profile on communicable disease hazard	Tetra Tech
5/10/07	3.3.2.2.3	Added description of 2005 Dillon earthquake	Tetra Tech
5/10/2007	3.3.2.5	Added new section on impact of earthquakes on future development	Tetra Tech
5/15/2007	3.3.3.2.5	Updated Ice Jam numbers	Tetra Tech
6/6/2007	3.3.3.3	Updated statistics on disaster assistance from flooding	Tetra Tech
5/16/2007	3.3.3.4.1	Updated number of total dams, high hazard dams, and dam rehabilitation numbers	Tetra Tech
6/5/2007	3.3.3.4.3	Revised values for state assets vulnerable to flooding	Tetra Tech
6/5/2007	3.3.3.5	Added new section on impact of flooding on future development	Tetra Tech
6/6/2007	3.3.4.1	Updated statistics regarding hazardous material incidents	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 3 – HAZARD ASSESSMENT

Date	Sub-Section	Description of Revision	Revised By
6/6/2007	3.3.4.2	Updated statistics regarding hazardous material incidents	Tetra Tech
6/12/2007	3.3.4.4.1	Revised example to compute composite risk index with current numbers	Tetra Tech
6/6/2007	3.3.4.4.2	Revised section on local plan integration	Tetra Tech
6/6/2007	3.3.4.5	Added new section on the impact of hazardous material incidents on future development	Tetra Tech
6/7/2007	3.3.5.2	Added information on Beartooth Highway landslide	Tetra Tech
6/7/2007	3.3.5.3	Added information on disaster declaration due to a landslide in 2005.	Tetra Tech
6/7/2007	3.3.5.5	Added new section on impact of landslides on future development	Tetra Tech
	3.3.6.5	Added new section on impact of terrorism and violence on future development	Tetra Tech
	3.3.7.5	Added new section on impact of volcanic eruptions on future development	Tetra Tech
6/8/2007	3.3.8.2	Updated statistics on avalanche fatalities	Tetra Tech
	3.3.8.5	Added new section on impact of winter storms and avalanche on future development	Tetra Tech
6/11/2007	3.3.9.3	Revision to text on personal vs. farm income and the effects of drought.	Tetra Tech
6/11/2007	3.3.9.3	Added an additional SBA drought declaration assistance project by the Small Business Administration.	Tetra Tech
6/11/2007	3.3.9.4.3	Updated statistics on contribution of timber and agriculture on state land to Montana economy	Tetra Tech
	3.3.9.5	Added new section on impact of drought on future development	Tetra Tech
6/12/2007	3.3.10.1	Described Enhanced Fujita tornado scale	Tetra Tech
6/12/2007	3.3.10.2	Updated tornado and lightning statistics through 2006	Tetra Tech
6/14/2007	3.3.11.1	Updated wildfire statistics	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 3 – HAZARD ASSESSMENT

Date	Sub-Section	Description of Revision	Revised By
	3.3.10.5	Added new section on impact of severe thunderstorms, hail, wind and tornadoes on future development	Tetra Tech
6/14/2007	3.3.11.4	Added climate change and insect disease as contributors to wildfire vulnerabilities	Tetra Tech
	3.3.11.5	Added new section on impact of wildland and rangeland fire on future development	Tetra Tech
<i>FIGURE CHANGES</i>			
5/4/2007	Figure 3.2.4-1	Eliminated existing figure on population	Tetra Tech
5/4/2007	Figure 3.2.4-1	Added new figure on population projections by county	Tetra Tech
5/4/2007	Figure 3.2.4-2	Added new figure on projections for elderly population by county	Tetra Tech
5/3/2007	Figure 3.2.3-1	Updated gross state product pie chart	Tetra Tech
5/3/2007	Figure 3.2.3-2	Updated figure on personal income by county	Tetra Tech
5/3/2007	Figure 3.2.3-3	Added figure on percent change in personal income	Tetra Tech
5/16/2007	Figure 3.3.3-3	Updated ice jam figure with more recent data	Tetra Tech
6/6/2007	Figure 3.3.4-1	Created new pie chart with updated data	Tetra Tech
6/8/2007	Figure 3.3.8-1	Updated figure on avalanche fatalities by state	Tetra Tech
6/11/2007	Figure 3.3.9-5	New figure showing drought conditions in May, July, and September for 2004-2007	Tetra Tech
6/28/2007	Figure 3.3.10-1	Revised tornado figure with updated data	Tetra Tech
6/28/2007	Figure 3.3.10-2	Revised hail figure with updated data	Tetra Tech
6/28/2007	Figure 3.3.10-3	Revised wind figure with updated data	Tetra Tech
6/28/2007	Figure 3.3.10-4	Revised tornado, hail, wind composite frequency figure with updated data	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 3 – HAZARD ASSESSMENT

Date	Sub-Section	Description of Revision	Revised By
6/14/2007	Figure 3.3.11-3	New figure showing WUI areas in Montana	Tetra Tech
6/14/2007	Figure 3.3.11-4	New figure showing graph of WUI vs. Non-WUI fires from 1996-2006.	Tetra Tech
<i>TABLE CHANGES</i>			
5/2/2007	Table 3.1.2-1	Updated with Communicable Disease and Biological Hazard vulnerability assessment methods	Tetra Tech
5/3/2007	Table 3.2.1-1	Updated Content and Structure Value by Agency	Tetra Tech
5/3/2007	Table 3.2.1-2	Updated values for major State buildings/complex	Tetra Tech
5/3/2007	Table 3.2.1-3	Updated acreages for Montana State Trust Land	Tetra Tech
5/3/2007	Table 3.2.2-5	Updated with population statistics	Tetra Tech
5/3/2007	Table 3.2.2-6	Updated top facilities for waste emissions	Tetra Tech
5/3/2007	Table 3.2.3-1	Updated highest/lowest population by county	Tetra Tech
5/4/2007	Table 3.2.4-1	Updated general population statistics	Tetra Tech
5/4/2007	Table 3.2.4-2	Updated counties with highest/lowest populations	Tetra Tech
6/7/2007	Table 3.3.2-5	Updated state employee totals for counties in earthquake zone	Tetra Tech
5/15/2007	Tables 3.3.3-1 and 3.3.3-2	Added ice jam statistics (streams and cities) east and west of Continental Divide	Tetra Tech
5/15/2007	Table 3.3.3-3	Updated flood declarations	Tetra Tech
6/6/2007	Table 3.3.3-4	Updated flood damages for 10 year period.	Tetra Tech
5/15/2007	Table 3.3.3-5	Updated communities with highest flood insurance claims	Tetra Tech
6/11/2007	Table 3.3.3-6	Updated number of federal, state, local, private, and utility dams	Tetra Tech
5/16/2007	Table 3.3.3-7	Updated list of dams requiring further analysis or rehabilitation.	Tetra Tech
6/5/2007	Table 3.3.3-8	Updated building and content values of state assets in floodplain	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 3 – HAZARD ASSESSMENT

Date	Sub-Section	Description of Revision	Revised By
6/6/2007	Table 3.3.4-1	Updated hazardous material incidents by mode of transportation	Tetra Tech
6/11/2007	Table 3.3.4-2	Updated number and quantity of transportation and fixed spills by product	Tetra Tech
6/11/2007	Table 3.3.4-3	Updated hazardous material incident types and receptors	Tetra Tech
6/12/2007	Table 3.3.4-7	Updated data on counties with high or moderate hazardous material composite index	Tetra Tech
6/7/2007	Table 3.3.6-3	Added recent disaster declarations	Tetra Tech
6/7/2007	Table 3.3.7-4	Updated building values and state employee count	Tetra Tech
6/8/2008	Table 3.3.8-1	Updated winter storm losses	Tetra Tech
6/8/2008	Table 3.3.8-3	Updated state declared winter storm disasters	Tetra Tech
6/8/2008	Table 3.3.8-4	Updated loss claims for state facilities from extreme winter weather	Tetra Tech
6/11/2007	Table 3.3.9-4	New table with 2006 Montana Natural Disaster Determinations	Tetra Tech
6/11/2008	Table 3.3.9-5	Updated USDA payments for drought assistance	Tetra Tech
6/11/2007	Table 3.3.9-5	Updated counties list of highest percentage farm income to illustrate effects of drought	Tetra Tech
6/12/2007	Table 3.3.10-1	Revised to compare Fujita and Enhanced Fujita tornado scales	Tetra Tech
6/12/2007	Table 3.3.10-2	New table to present Enhanced Fujita tornado scale damage indicators	Tetra Tech
6/12/2007	Table 3.3.10-4	Updated table with events through 2006	Tetra Tech
6/13/2007	Table 3.3.10-6	Updated frequency table for tornado, wind and hail events	Tetra Tech
6/14/2007	Table 3.3.10-7	Recalculated hazard frequency based on results in Table 3.3.10-6	Tetra Tech
6/11/2007	Table 3.3.10-8	Updated and added losses from wind and hail to state facilities	Tetra Tech
6/12/2007	Table 3.3.10-9	Updated hazard frequency, building and content value, and employee county	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 3 – HAZARD ASSESSMENT

Date	Sub-Section	Description of Revision	Revised By
6/13/2007	Table 3.3.11-2	Updated wildfire number and acreage statistics	Tetra Tech
6/13/2007	Table 3.3.11-3	Updated wildfire disasters	Tetra Tech
6/13/2007	Table 3.3.11-5	Updated acreage of cropland and CRP	Tetra Tech
6/13/2007	Table 3.3.11-6	Updated building and content values for state facilities most prone to wildfire	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 4 – MITIGATION STRATEGY

Date	Sub-Section	Description of Revision	Revised By
<i>TEXT CHANGES</i>			
7/12/07	4.1	Update process for goals, objectives and mitigation actions. Revised goals and objectives to present new priorities and additional projects. Referenced Appendix B through G which contain listings of mitigation projects from Local PDM Plans.	Tetra Tech
7/12/2007	4.3	Revised State Capability Assessment by eliminating Private Advisory Group.	Tetra Tech
7/12/2007	4.3.1	Added District DES Representative to State Mitigation Structure	Tetra Tech
7/12/2007	4.3.2	Updated PDM Policies, Programs and Capabilities by giving current status of approved Local Plans. Revised statistics on amount paid out in flood insurance claims, number of policies, and value of insured properties. Revised statistics for Dam Safety Program. Added section on National Weather Service Initiatives. Removed historical program description.	Tetra Tech
7/12/2007	4.3.5	Added discussion on new legislation to avoid future development in hazard prone areas, i.e. wildland-urban interface.	Tetra Tech
<i>TABLE CHANGES</i>			
7/12/2007	Table 4.1-1	Revised state-wide initiatives to reflect new mitigation projects.	Tetra Tech
7/21/2007	Table 4.1-2	Added table of prioritized state-specific mitigation projects	Tetra Tech
7/12/2007	Table 4.3-1	Added table to present status of funded PDM-C projects	Tetra Tech
7/12/2007	Table 4.3-2	Updated CRS status of participating communities	Tetra Tech
7/12/2007	Table 4.3-3	Updated status of communities not participating in the NFIP	Tetra Tech
7/13/2007	Table 4.4-1	Updated growth policy and subdivision requirement to address WUI by 2009	Tetra Tech
<i>FIGURE CHANGES</i>			
7/12/2007	Figure 4.3-1	Updated figure showing Planning Status of Montana Counties	Tetra Tech
7/12/2007	Figure 4.3-2	Created new figure to show revised status of NFIP program in Montana	Tetra Tech
7/12/2007	Figure 4.3-3	Created new figure showing revised status of NFIP communities not participating in program	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 4 – MITIGATION STRATEGY

Date	Sub-Section	Description of Revision	Revised By
7/12/2007	Figure 4.3-4	Removed Montana Mitigation Project figure and replaced with Table 4.3-1	Tetra Tech
7/12/2007	Figure 4.3.-4	Added figure showing Montana StormReady communities	Tetra Tech
7/12/2007	Figure 4.3-5	Added figure showing NOAA Weather Radio coverage in northeast Montana.	Tetra Tech
7/12/2007	Figure 4.4-1	Updated figure on Montana communities with local building codes	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 5 – PLAN AND PROJECT COORDINATION

Date	Sub-Section	Description of Revision	Revised By:
7/12/2007	5.1	Revised statistics on approved and draft Local PDM Plans	Tetra Tech
7/12/2007	5.1.1	Updated funding status for Local PDM Plans	Tetra Tech
7/12/2007	5.1.2	Updated Technical Assistance section	Tetra Tech
7/12/2007	5.1.3	Eliminated recruitment section since all Montana jurisdictions are participating in PDM initiative	Tetra Tech
7/12/2007	5.2	Updated the time required for FEMA review of Local PDM Plans. Updated local plan integration into State Plan	Tetra Tech
7/12/2007	Table 5.2-1	Updated table to reflect current dates of approval/integration of Local Plans	Tetra Tech
7/21/2007	Table 5.3-1	Added project ranking for planning projects.	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 6 – PLAN MAINTENANCE PROCEDURES

Date	Sub-Section	Description of Revision	Revised By:
7/12/2007	6.1	Updated plan evaluation and maintenance procedures. Included section on approach from past plan and revised approach for next three year cycle.	Tetra Tech
7/19/2007	6.2	Updated project monitoring procedures. Included section on approach from past plan and revised approach for next three year cycle.	Tetra Tech

**MONTANA STATE PDM PLAN
REVISION LOG**

SECTION 7 – REFERENCES AND FOOTNOTES

Date	Sub-Section	Description of Revision	Revised By:
7/20/2007	7.1	Updated references on assets and population (Section 3.1 & 3.2)	Tetra Tech
7/20/2007	7.2	Added references on communicable disease hazard (Section 3.3.1)	Tetra Tech
7/20/2007	7.3	Updated references on earthquake hazard (Section 3.3.2)	Tetra Tech
7/20/2007	7.4	Updated references on flooding hazard (Section 3.3.3)	Tetra Tech
7/20/2007	7.5	Updated references on hazardous material incident hazard (Section 3.3.4)	Tetra Tech
7/20/2007	7.6	Updated references on landslide hazard (Section 3.3.5)	Tetra Tech
7/20/2007	7.7	Updated references on terrorism and violence hazard (Section 3.3.6)	Tetra Tech
7/20/2007	7.8	Updated references on volcanic eruption hazard (Section 3.3.7)	Tetra Tech
7/20/2007	7.9	Updated references on winter storm/avalanche hazard (Section 3.3.8)	Tetra Tech
7/20/2007	7.10	Updated references on drought hazard (Section 3.3.9)	Tetra Tech
7/20/2007	7.11	Updated references on thunderstorms, hail, wind, tornado hazard (Section 3.3.10)	Tetra Tech
7/20/2007	7.12	Updated references on wildfire hazard (Section 3.3.11)	Tetra Tech
7/20/2007	7.13	Updated footnote references (Sections 1, 2 and 4)	Tetra Tech
7/20/2007	7.14	Added references on potential loss estimates from local plans (Section 3.3)	Tetra Tech